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APPENDIX C.

PROPOSED RESOLUTIONS (RULES OF STATISTICAL PRACTICE) PRESENTED AT THE FIRST ANNUAL MEETING
OF THE AMERICAN PUBLIC HEALTH ASSOCIATION:
SECTION ON VITAL STATISTICS,
AT ATLANTIC CITY, N.J., SEPT.
30 TO OCT. 4, 1907.

NOTE.—Each proposition should be considered on its merits. It is not to be understood, from the mere fact of presentation, that the Bureau of the Census either does or does not advocate the adoption of any individual item. In some cases, references may be given to accepted modes of treatment or a specific recommendation. However simple and obvious some of the propositions may appear, there is not one of them upon which there is a strict agreement among American official statistical publications at the present time. Hence the necessity for definite decisions.

(1) STATEMENT OF CAUSE OF DEATH.*

1. That a uniform mode of statement of causes of death upon certificates of death shall be adopted by all registration offices in the United States which shall provide, first, in the case of a death from disease, for the name of the DISEASE CAUSING DEATH, and, in the case of a death from violence, for the MEANS OF DEATH, AND WHETHER ACCIDENTAL, SUICIDAL, OR HOMICIDAL; together with such subsidiary information, if any, as may be necessary, under the head of "resulting in" or "aided by."

2. That a continuous and systematic effort be made, through the conjoined action of the local, State, and government authorities, to secure the co-operation of physicians and coroners in the more definite and satisfactory statement of causes of death; and that for this purpose each certificate of death bear a certain minimum amount of suggestions in regard to the statement of cause of death, which shall be uniform throughout the United States, in addition to any special instructions or regulations required for local use.

As a basis for discussion in regard to what this minimum amount shall be, the following draft of suggestions, which can readily be inserted upon the reverse side of any certificate or printed on the inside of the cover of the booklet of blanks supplied to physicians and coroners, has been prepared:—

(DRAFT OF) SUGGESTIONS TO PHYSICIANS AND CORONERS RELATIVE TO THE STATEMENT
OF CAUSE OF DEATH.

(Adopted by the American Public Health Association and recommended by the United States Bureau of the Census for the purpose of securing uniformity in returns of deaths throughout the United States.† *Please read carefully.*)

A. *Deaths from disease.*

1. Name, first, the DISEASE CAUSING DEATH. What is wanted is the name of the *disease* (or malformation) itself responsible for the death; *not* a mere secondary, consecutive,

* See full text of census pamphlet No. 107, "Modes of Statement of Cause of Death and Duration of Illness upon Certificates of Death," which is submitted as a part of this recommendation.

† Provided, of course, that any definite instructions can be generally agreed upon.

contributory, or immediate cause, complication, symptom, terminal condition, or mode of death. Never report a death from such "causes" as asphyxia, asthenia, collapse, coma, convulsions, debility, dropsy, exhaustion, heart failure, hypostatic pneumonia, inanition, marasmus, old age, shock, syncope, or weakness, if a definite disease causing the condition can be named. WAS IT PUERPERAL? Always qualify, as *puerperal* convulsions, *puerperal* peritonitis, *puerperal* septicemia, etc., all deaths resulting from childbirth or miscarriage.

2. *Important* secondary affections or independent (concurrent) diseases actually contributing to the death may be named.

Example: Measles (disease causing death); broncho-pneumonia (secondary affection).

B. Deaths from violence.

1. Name, first, the MEANS OF DEATH, and whether ACCIDENTAL, SUICIDAL, OR HOMICIDAL; as, *accidental drowning, suicide—carbolic acid; railroad collision.*

NOTE.—In the last example, it is not necessary to write "Accidental," because such cases are *plainly* of that character. A judicial determination of "manslaughter" on account of negligence does not affect the *statistical* character of the return, and a coroner should not delay the filing of the certificate of death on that account.

2. Nature of injury (lesion) or immediate cause of death may be given if not implied under (1).

3. Important *secondary* affections (*e.g.*, erysipelas, septicemia, tetanus) and contributory diseases (*e.g.*, insanity, alcoholism) should always be stated.

As an example of how such data might be provided for with but slight modification of the standard blank, the following form is submitted:—

MEDICAL CERTIFICATE OF DEATH		
DATE OF DEATH		
.....	19.....
(Month)	(Day)	(Year)
I attended deceased from 19.....		
to 19....., I last saw h..... alive on		
..... 19....., and I HEREBY CERTIFY		
that death occurred on the date above at M. The DISEASE		
CAUSING DEATH [<i>or</i> MEANS OF DEATH*] was:		Duration in
(Deaths from violence)		Years, Months,
		Days, or
		Hours.
Resulting in:		
or Aided by:		
(Signed).....		M. D.
..... 190..... (Address).....		
* State how injury occurred and whether { Accidental? { Suicidal? { Homicidal?		

Duration.

Enter duration, in years, months, days, or hours, after each separate cause of death. Duration of a disease is from its commencement until death occurs; do not merely give time of final illness in chronic diseases. Duration in deaths from violence is from the time of injury or appearance of complication until death.

(2) STATEMENT OF OCCUPATION.

NOTE.—In census pamphlet No. 107, "Modes of Statement of Cause of Death and Duration of Illness upon Certificates of Death," the following statement is made (p. 8):—

"*Occupation.*—While this item should afford some of the most practically useful information derived from mortality statistics, it does not do so at present. A complete study of the subject by an authorized committee, and with the aid of all who are interested in statistics of the mortality of occupations, should be made and an improved schedule formulated, if one not too cumbrous can be devised, that will enable a beginning to be made in the collection of satisfactory material. A form will be submitted merely as a basis of discussion, and so that definitive action *may* be taken in 1908 without waiting another year for the report of the special committee in charge of the subject. It is desirable that all changes in the standard blank be made at the same time. In the meantime it is urged that special attention be given to the subject by statisticians. A symposium on 'Occupations' is planned in the American Statistical Association, in which the requirements of the schedule and instructions on occupations may be discussed from the several points of view of population, industrial (manufactures) and vital statistics."

There is little variety in the form of this question upon certificates of death employed in this country, nearly all of them asking for the simple statement of "Occupation," as in the standard blank:—

OCCUPATION

1. An attempt should be made to secure not only the kind of occupation (*e.g.*, laborer), but also the kind of industry (*e.g.*, pottery).

2. For satisfactory statistics of occupational mortality, it is desirable to know the length of time employed from beginning the occupation until death.

3. In case of a recent change of occupation (———* years before death), it is desirable to know the previous occupation, which may have been the cause of change to a lighter employment and the predisposing cause of death.

4. For persons unemployed it may be important to know the last previous employment (———* years before death), as this may have contributed to invalidism or retirement, and may have been a contributing cause of death.

5. Instructions in regard to the reporting of occupations should be uniform in population, industrial and mortality schedules (certificates of death), and uniform instructions should be prepared for physicians and local registrars, and enforced by State registration offices, on this basis.

6. Occupations should be stated for all decedents over ten years of age (and for decedents under ten years of age if employed in a mill, factory, or in any gainful occupation).

7. For children under ten years of age the occupation of the father (or of mother, if not supported by father) should be obtained on account

* Time limit to be determined.

of the great value of such information for a proper study of infant and child mortality.

NOTE.—If deceased has been employed in above occupation for less than —————* years, please fill out statement of LAST PREVIOUS OCCUPATION on reverse side. The complete and correct statement of occupation is most important, and informants, or physicians, are requested to make a precise statement. Local registrars should see that the blank is properly filled out in this respect.

OCCUPATION (Last gainful occupation; if under 10 years, that of FATHER)			
(Kind of work?)	Trade?	Profession?)	From..... To..... (Years only)
(Employed in what kind of business, mill, factory? On farm, railroad, etc.)			

(3) STATISTICAL DEFINITION OF DEATHS.

1. Total deaths, as stated in mortality reports and bulletins, should include *all deaths* that occurred in the area of the State or city during the specified time.

Still-births.

2. Still-births should not be included in deaths.

NOTE.—Still-births may be *registered*, of course, either separately as still-births, as births or deaths, or preferably as both births and deaths. These rules have no bearing upon the method of collecting the returns, but relate solely to the statistical presentation of the data.

3. Children born alive and *living for any time whatever*, no matter how brief, after birth, should not be classed as still-births, even though reported by the attending physicians or midwives as “Still-born.”

4. Whenever age, in days, hours, or minutes, is reported for a “Still-born” child, or indicated by difference between dates of birth and death, the registrar should secure a statement that will enable the case to be classed with certainty either as a still-birth or as a death. If no additional information can be obtained, the statement of age should govern, and the case be compiled as a death, not as a still-birth.

Premature Births.

5. Premature births (not still-born) should be included in total deaths (classified under International Title No. 151).

6. Premature births (still-born) should be classed under still-births, and should not be included in total deaths.

7. When a premature birth is reported as “Still-born” and an inconsistent statement of age (days, hours, minutes) is also given, the registrar should endeavor to secure a statement that will enable the case to be classed with certainty either as a still-birth or as a death. If no additional information can be obtained, the statement of age should govern, and the case be compiled as a death, not as a still-birth. (See also following paragraph.)

8. In the above case of inconsistent statement of “Still-born” and

*Time limit to be determined.

age, if the period of utero-gestation is also given and is under seven months, then the case should be classed as a still-birth.

9. When a premature birth is reported with no statement of age (space left blank), the local registrar should endeavor to obtain a statement of age, or at least that the child was born alive; but, in absence of any further data, the case should be compiled as a still-birth.

Deaths of Non-residents.

10. All deaths of transients or non-residents occurring in a State or city should be included in the tables of total deaths.

NOTE.—It is not fair to exclude non-residents *unless* all deaths of residents occurring elsewhere can be included: this is quite impracticable in the United States under present conditions and the large extent of non-registration territory. No rules based on duration of actual residence of transients or nature of cause of death have been generally adopted, so that deaths of a certain character would be uniformly excluded. It is evident that the death of a non-resident of a city who succumbs to typhoid fever after living there long enough for the time to include the duration and period of incubation of the disease should be properly charged to its mortality. On the other hand a death from pulmonary tuberculosis occurring within 1, 2, 3, . . . months after arrival, may not be properly chargeable to the mortality of the State or city. As a provisional method of treatment, the following paragraph is submitted:—

11. A separate column showing “Deaths of non-residents” may be given, which should include deaths in hospitals, institutions, and of transients and non-residents, on whose certificates of death appears a statement of “Former or usual residence,” “Where was disease contracted, if not at place of death,” and “How long at place of death,” the time stated in answer to the last question being *less than six (?) months and less than the duration of the disease causing death.*

NOTE.—The limit of residence is suggested merely as a basis for discussion. Evidently, some line of demarcation should be fixed if it is proposed to treat deaths of non-residents upon a uniform basis. In addition to the duration of the disease causing death, its period of incubation may be considered as a factor of the decision. But, whatever plan is adopted for the special statement of deaths of non-residents, there should be no interference with the complete statement of total deaths, inclusive of all deaths of non-residents, as required by paragraph 10.

Deaths in Institutions.

12. Deaths of residents of a city in a hospital or institution situated within the city limits should be distributed by the local registrar to the districts of residence (borough, ward, sanitary district) as far as possible.

13. Deaths of residents of a city in an institution (*e.g.*, almshouse) situated outside of the city limits, but chiefly or entirely occupied by commitments from the city, should be included in the total deaths of the city, and be distributed by the city registrar to the districts of residence as provided in paragraph 12.

NOTE.—This is suggested for discussion. It apparently departs from the general principle of registering a death where it occurs, and there only. On the other hand it would relieve extra-urban districts containing city institutions from an apparently excessive mortality, enable the true death-rate of the city to be known, and make the statistics more comparable with future years when, with the extension of the city limits, the institution may come to be included in the urban area. The successful accomplishment of such distribution requires co-operation of local registrars, and would evidently be undesirable and

unfair unless all cities included the deaths of their dependent or defective classes on the same basis. A limit of residence might require to be considered.

14. Deaths of inmates of a State or government institution should be included in the total deaths of the areas containing them; but special columns may be employed to permit the separate statement of such deaths, as in the case of non-residents.

NOTE.—The alternative plan of distributing the deaths in a State institution (*e.g.*, insane asylum) to the counties or cities from which the inmates were received may be considered, or the institution may be treated as an independent registration area. In any case, if the deaths are eliminated the constituent population should also be eliminated before computing death-rates.

Deaths on Trains or Vessels.

15. Passengers dying on trains or vessels should be registered as deaths at the station or port where the bodies are removed.

NOTE.—Such cases are few, and the rule is suggested to secure early registration at the nearest practicable point to the place where death occurred. These deaths may be treated as those of non-residents (paragraph 10), and it is desirable that a record, not for statistical purposes, be made at the place of residence.

16. Deaths caused by railroad accidents or by disasters incident to navigation should be registered in the district that includes the place of death or where the bodies were brought ashore.

Deaths at Sea.

17. (Subordinate to 15, 16.) In deaths and burial at sea, or in marine disasters where the bodies are not recovered, the deaths should be registered at the port of embarkation; and for this reason a register should be kept at the shipping office of all sea-going vessels containing the essential particulars concerning each member of the passengers and crew. Such deaths may be separately noted in the statistical tables of the port of embarkation.

Period Covered.

18. Total deaths should include all deaths that occurred in the given area during the period stated in the table, and no others:—

(a) A weekly bulletin should include all deaths that occurred during the week ending at 12 P.M., Saturday, and no others.

(b) A monthly bulletin should include all deaths that occurred during the calendar month, and no others.

(c) An annual report should include all deaths that occurred during the calendar year, and no others.

NOTE.—The basis of compilation should be the occurrence of the deaths, not the time of receipt in the registration office. No allowance or "offsetting" need be made for "delayed returns" in a fully effective administration of a State or city office.

Headings of Tables.

19. Every table of total deaths should explicitly state in its heading that still-births are not included, and, if any classes of deaths are omitted

from a table apparently relating to total deaths, the items excluded should be explicitly stated either in the heading or in a foot-note.

Death-rates Based on Total Deaths.

20. Any statement of the death-rate (general, crude, or gross death-rate) of a State or city should be understood to be based, unless expressly qualified, upon the *total deaths, exclusive of still-births*, and without any omissions of deaths whatsoever.

Viability or Non-viability.

CASE. (Richmond, Va., 1907).—"We have a death certificate in which the cause of death is stated as 'premature birth, non-viable,' and the contributory cause is given as 'typhoid fever (mother).' The doctor states to me that this was a six-months' child that gasped a little for three hours, and that he did not consider the child viable when born. What shall we do with this case? Shall it be counted as a death? If so, we are, of course, entitled to the birth at least, and yet the child is distinctly stated to be non-viable. Have you any rule as to what age children are considered viable?" This case presents some interesting features, and, in order to bring out the general opinion and practice of registration officials, the following proposed ruling is formulated:—

21. Statement of viability or non-viability of an infant prematurely born shall not be considered in classification. The case above should be compiled (paragraph 5) both as a birth and as a death.

NOTE.—With the adoption of improved methods of caring for prematurely born infants (incubator), undoubtedly many lives may be saved that would formerly have been considered "non-viable." The better practice is, as stated by the American Text-book of Obstetrics, vol. ii, p. 387: "It has been customary to fix the period of viability at twenty-eight weeks. As a number of premature infants of twenty-four weeks have successfully been raised, the suggestion that any child that breathes at birth be treated as viable should be adopted in place of any fixed rule based upon the age of the fetus or upon its size."

(4) STATISTICAL DEFINITION OF STILL-BIRTHS.

1. For registration purposes, still-births should include all children born who do not live any time whatever, no matter how brief, after birth.

NOTE.—This definition includes children dead some time before birth, as well as children alive immediately before birth, but who die during the process of birth and before its completion.

2. Birth (completion of birth) is the instant of complete separation of the entire body (not body in the restricted sense of trunk, but the entire organism, including head, trunk, and limbs) of the child from the body of the mother. The umbilical cord need not be cut or the placenta detached in order to constitute complete birth for registration purposes. A child dead or dying a moment before the instant of birth is a still-birth, and one dying a moment, no matter how brief, *after* birth, was a living child, and should not be registered as a still-birth.

3. No child that shows any evidence of life after birth should be registered as a still-birth.

NOTE.—The usual evidence of life is breathing, but beating of heart or any other sign of life after birth should be accepted, as well as the fact of respiration or crying out, to determine that the child was not still-born.

4. Still-births should not be included in tables of births or in tables of deaths. They should be given in separate tables of still-births.

5. Still-births may be registered either (1) with births, (2) with deaths, (3) with both births and deaths, and (4) separately as still-births.

6. Registration as both births and deaths is preferable, in which case the returns should be compared, a correct list of still-births made, and the corresponding certificates eliminated from the births and from the deaths for purposes of compilation.

7. Midwives should not be allowed to sign certificates of still-births.

8. It is not advisable to fix a lower limit of utero-gestation below which still-births need not be registered.

9. For comparative statistical purposes still-births should relate to a definite period of utero-gestation; for example, from the seventh month.

NOTE.—There is evidently no propriety in comparing returns of still-births from a city which registers them as far back as the fifth month with another in which only those after the seventh month are recorded. An effort might be made to secure a complete record, by double registration as birth and death, of all after the seventh month, registering also any cases before the seventh month, but not including them in the ordinary tables of still-births.

10. All birth certificates that may be used for the registration of still-births should provide for the time of utero-gestation, if less than full term.

(See also paragraphs 2 to 9 in preceding section on deaths.)

(5) STATISTICAL DEFINITION OF BIRTHS.

1. "Births" should be used to denote children born alive only, so that it should not be necessary to specify "living births."

2. Whenever, under the foregoing rules, a death should be registered, there should be a corresponding registration, at some previous time, of a birth; and whenever a still-birth is registered, it should be rigorously excluded from both the statistics of births and of deaths.

(See preceding paragraphs relating to deaths and still-births.)

(6) ESSENTIAL REQUIREMENTS FOR REGISTRATION OF DEATHS.

NOTE.—These are merely presented for reinforcement (see Census circular No. 71) and for comparison with the proposed essential requirements for the registration of births.

1. Deaths must be registered immediately after their occurrence.

2. Certificates of death [of standard form] should be required.

3. BURIAL or REMOVAL PERMITS are essential to the enforcement of the law.

4. Efficient local registrars are necessary.

5. The responsibility for reporting deaths to the local registrars should be fixed.

6. The Central Registration Office should have full control of the local machinery, and its rules should have the effect of law.

7. The transmission and preservation of returns should be provided for.

8. Penalties should be provided [and enforced].*

* The words in brackets have been added.

(7) ESSENTIAL REQUIREMENTS FOR REGISTRATION OF BIRTHS.

1. Births must be registered immediately after their occurrence.
2. Certificates of birth of standard form should be required.
3. SOME CHECK is necessary to secure enforcement of the law.
4. Efficient local registrars are necessary.
5. The responsibility for reporting births to the local registrars should be fixed.
6. The Central Registration Office should have full control of the local machinery, and its rules should have the effect of law.
7. The transmission and preservation of returns should be provided for.
8. Penalties should be provided and enforced.

NOTE.—The character of the check mentioned in paragraph 3 is left for consideration in connection with an analysis of present methods.

(8) METHOD OF TESTING ACCURACY OF REGISTRATION OF DEATHS.

1. The accuracy (completeness with respect to total number) of the registration of deaths in a State may be satisfactorily determined by the proportion found actually registered out of a sufficiently large number (10 per cent. of the total?) derived from any independent source,—*e.g.*, newspaper reports,—and properly distributed throughout the State.
2. Local registrars should regularly note newspaper reports of deaths in order to detect omissions and secure complete registration.

NOTE.—The Registrar-General of England and Wales in his "General Rules concerning Registration of Births and Deaths" directs that the local registrar "should also systematically consult the announcements of Births and Deaths in the local newspapers."

(9) METHOD OF TESTING ACCURACY OF REGISTRATION OF BIRTHS.

1. The accuracy (completeness with respect to total number) of the registration of deaths in a State may be satisfactorily determined by the proportion found actually registered out of a sufficiently large number (10 per cent. of the total?) derived from any independent source; *e.g.*, newspaper reports or lists of infants registered as deaths, and whose certificates of death enable the place and date of birth to be fixed, provided they are properly distributed throughout the State.

(10) CONSTITUTION OF STANDARD TABLES OF VITAL STATISTICS.

1. Every State or city registration office publishing an annual (or biennial) report should include therein a table showing the population (properly estimated for intercensal years), total number of births exclusive of still-births, total number of deaths exclusive of still-births, total number of still-births, total number of marriages,* and total number of divorces,* for each year of registration.
2. It is desirable that the corresponding rates be given, but the primary figures should be presented whether it is possible to present rates or not.
3. Notes should be given in all instances when discrepant figures have

* Providing these items can be obtained.

been officially printed relative to returns for any year, and the correct figures should be definitely stated.

4. Notes should be given on changes in methods of compiling still-births, and a correct statement of still-births should be established for each year, on the basis of the definitions approved. If necessary, re-examination of the original returns should be made for the purpose of obtaining comparable figures.

(11) ADOPTION OF UNIFORM AGE PERIODS IN MORTALITY STATISTICS.

1. In primary or general tables of deaths, ages should be given in quinquennial periods throughout, with subdivision of the first quinquennial period into individual years, except that all ages over one hundred years may be stated in one group.

2. Age periods should always be stated as both inclusive; thus, 5-9 means the years 5, 6, 7, 8, and 9.

3. Unknown ages should never be accepted in returns. The approximate age, according to the best judgment of the reporter, should be given if the exact age is unknown. When accepted by the central registration office, however, they should be given a place in the statement of ages in order to show the imperfect quality of registration.